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MAYBACK & HOFFMAN, P.A.
5722 S. FLAMINGO ROAD #232
FORT LAUDERDALE, FL 33330

EXAMINER

PELLEGRINO, BRIAN E

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/784,462
Filing Date: February 23, 2004
Appellant(s): BERRA ET AL.

MAILED
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Group 3700

Gregory Mayback
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 5/4/07 appealing from the Office action
mailed 7/17/06.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

Appellant's brief presents arguments relating to drawing objections. This issue relates to petitionable subject matter under 37 CFR 1.181 and not to appealable subject matter. See MPEP § 1002 and § 1201.

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: a rejection of claims 3,4,18,48,50,52,54,56,58,60,81,82 over VanSchie was not made of which Applicant disputed and argued on pages 35-37,42,43,44 of the brief. Thus the arguments are moot.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,464,719	Jayaraman	10-2002
2003/0088305	Van Schie et al.	5-2003
6,099,558	White et al.	8-2000

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1,2,5,6,10,11,14,15-17,20,21,24-29,40-42,44-47,49,51,55,57,59,65-67,70-72,75-77,85-87,90-92,95-97 are rejected under 35 U.S.C. 102(a,e) as being anticipated by Van Schie shows a stent graft having a plurality of stents with the middle stents being considered as inner stents and a tubular graft body 2 surrounding the stents. It can also be seen there is a curved longitudinal support member 8 connected to the graft independent of the stents and has rounded ends 9,10. Van Schie also discloses the longitudinal member can even be shorter or extend less than the distance between the end stents, paragraph 47. Van Schie et al. disclose the support member is a polymer or metal and is pre-formed in a curved shape, paragraph 45. The support member is substantially symmetrical with respect to a centerline that is about the middle of the device going around the circumference. It can be construed that the rounded ends are curved extremities and "substantially asymptotic". With respect to the new limitation of claims 1 and 15 that the curved support member has a centerline parallel to

the longitudinal axis, it can be said that the center point of any arc that lies along a longitudinal axis of a longitudinally extending conduit would be parallel to the longitudinal axis. Regarding claims 66,71,76,86,91,96, it can be said the stents have a linear longitudinal profile since the Examiner is interpreting linear as: of or relating to a line. Thus any type of line clearly can be drawn through the length of the stents since they are aligned with one another. With respect to claims 67,72,77,87,92,97, it can be seen that Figs. 1,2,4,7,8,9 and 10 all show the stents with a circular cross-section.

Claims 1-6,10-21,24-29,40-60,65-67,70-72,75-77,80-82,85-87,90-92,95-97 are rejected under 35 U.S.C. 103(a) as being unpatentable over White et al. (6099558) in view of Jayaraman (6464719). White et al. disclose a stent graft (Fig. 3) with a plurality of stents 17 and a tubular graft body 16. It can also be seen that the stent graft has a distal most stent 17a with at least one more apex than another of the stents. However, White et al. fail to disclose a longitudinal support member. Jayaraman teaches (Fig. 8) a longitudinal support member 53 that is curved and shorter than the body of the stent graft and since it is joined to the graft, it is not touching the stents. Thus, by having the shorter length of the body of the stent graft it provides a gimbal. Jayaraman also teaches (Fig. 7) that the support members have looped ends 55. Jayaraman additionally teaches that the longitudinal members have what can be construed as a partial helix shape or S-shape and used in expansion and made of nitinol, col. 2, lines 3,4,37,38. It is also noted that Jayaraman shows (Figs. 3,4) that the longitudinal curved members are connecting pieces for stent sections, col. 3, lines 29,30,53,54. It would have been obvious to one of ordinary skill in the art to use curved longitudinal support members as

taught by Jayaraman in the stent graft of White et al. such that it provides more support to the vessel walls and assist in expansion and keep the stent in its expanded form together. Regarding the limitations that the support is symmetrical to the centerline of the graft, it is being interpreted that the middle of the graft is the centerline and thus half of the support is on one side and the other half on the opposite side. The support members can also be said to symmetrical with respect to a centerline through itself.

(10) Response to Argument

Argument 3(b)

Applicant argues that the gimbal is not shown in Van Schie and the structure of other claims that is allegedly implying a gimbal structure is not disclosed. First, the Examiner notes that Applicant's arguments are moot since the Examiner did not even reject the claim containing the word gimbal. Second, the Examiner would like to note that all claims use the non-limiting preamble language of "comprising" to describe the stent graft. The Van Schie reference does indeed include a longitudinal support member that clearly extends between the stents. The Examiner would like to note that the claims do not state the longitudinal structural member is only required to be between the stents or entirely between the stents. In fact it is possible to have longitudinal support or structural members incorporated into the stent graft at least 3 ways:

- 1) make the support longer than the distance between the stents,
- 2) make the support shorter than the distance between the stents, and
- 3) make the support the same length as the distance between the stents.

Applicant argues that Van Schie discloses one of the possible ways of including the longitudinal support member and that is choice 1) or a longer member that extends past the end stents. However, the Examiner disagrees since the Applicant failed to indicate where this was stated in the Van Schie reference or how this is shown in the drawings. Applicant's representative just makes this assumption in view of the drawings of VanSchie. The Examiner notes that Van Schie discloses two of the 3 possibilities above of incorporating a longitudinal member in the stent graft, such as choice 2) that it can be shorter, see paragraph 47 and choice 3) a support having a length the same distance between two stents. In the absence of any specific teaching, one of ordinary skill in the art would immediately envisage all of these possibilities.

Argument 3(c)

Applicant also argues that Van Schie fails to disclose the limitation of claim 16 that the longitudinal extremity is curved. As seen in the drawings, Van Schie shows the ends as having a rounded portion. Anyone of ordinary skill in the art would agree that something that is rounded has a curved portion. Additionally, it can even be said the fact that the longitudinal member is curved it has "curved extremities" or ends. The claim does not exclude an interpretation that the extremity is integral with the longitudinal member. Applicant also argues that the longitudinal member having centerline parallel to the longitudinal axis and "substantially symmetrical with the

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longitudinal axis". The Examiner would like to note that a center line can be arbitrarily established from several reference points that goes through the longitudinal member through such that it would be parallel, for example a tangential line. Applicant's representative also argues that claims 66,71,76,86,91,96 which recite "a linear longitudinal profile" is not disclosed by Van Schie. However, the interpretation of this limitation in its broadest sense is any line along the length of the longitudinal axis of the stent. Since the stent of Van Schie clearly has a length and longitudinal profile in Figs. 1-14 it can be said that it has a linear profile. Something that is linear only needs to lie along any type of a line. In this instance Van Schie clearly has stents aligned with one another to form something linear.

Argument 3(d)(i)

Applicant argues Van Schie does not disclose a curved longitudinal member. The Examiner would like to note that Fig. 2 and paragraph 45 clearly disclose the longitudinal structural member is curved.

Argument 3(d)(ii)

Applicant additionally argues that claims 12 and 13 features are not disclosed by Van Schie. However, this argument is moot since the Examiner did not reject these claims over Van Schie.

Argument 3(d)(iii)

Applicant additionally argues Van Schie does not disclose teachings of the length of the longitudinal support member. However, the drawings clearly provide teachings of a length and paragraph 47 states the length can be adjusted in a variety of ways.

Argument 3(d)(v)

Applicant also argues that claims 67,72,77,87,92,97 including the limitation of a circular cross-section for the stent profile is not disclosed by Van Schie. However, the drawings of Van Schie clearly show a circle to illustrate an end and thus the stents have a circular cross-section.

Argument 4

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Jayaraman provides a motivation to incorporate the longitudinal member in that it is a connecting member to keep the stent sections together and prevent them from moving. Additionally, the longitudinal members also provide more structural stability to the graft members. Thus, one of ordinary skill in the art would look to incorporate longitudinal members in the stent graft device of White as taught by Jayaraman such that it prevents the collapse of the vessel and improves the structural design.

Argument 4 (a)

Applicant states that the longitudinal member of Jayaraman is not symmetrical about the longitudinal axis. However, the Examiner would like to note that the claims state the longitudinal member is "**substantially**" symmetrical which when interpreting the limitation it allows for some deviation. Thus, the Jayaraman longitudinal member can be "substantially" symmetrical.

Argument 4 (b)

Applicant also argues the rounded ends of the longitudinal members disclosed by Jayaraman are not curved extremities. However, the Examiner in giving the broadest reasonable interpretation and thus it can be said anything that is rounded (as Applicant admits on page 52) has a curve to it and thus can be a "curved extremity" since it is at the end.

Argument 4 (c)

Applicant additionally argues that Jayaraman and White do not disclose the length of the longitudinal member. However, as shown by Jayaraman, it is seen that the longitudinal member is clearly shorter than the length of the stents and if it is attached to the graft then it can be said it is not connected or touching the stents.

Argument 4 (d)(i)

Applicant states the features of claims 3-5,10,40 are not disclosed by Jayaraman. However, in the broadest reasonable interpretation, the longitudinal member of Jayaraman does have a plurality of "S-shape" sections integrally formed into a long multiple "S-shape" member. The wavy or curved longitudinal member disclosed by Jayaraman clearly can be considered as a "partial" helix. Regarding the "preformed"

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limitation of claim 10, if the structure is cut from sheets and then rolled into tubes as shown (Figs. 2,3), then inherently the curved configuration of the longitudinal member is "pre-formed". With respect to claim 40, it can be said that the support member is "substantially" reverse-mirror symmetrical with respect to the centerline since there can be some deviation by the use of the limitation "substantial" and the centerline can be parallel to the longitudinal axis since a point exists on the longitudinal member that is central to it that can have a centerline established there through that would be parallel to the longitudinal axis.

Argument 4 (d)(ii)

Applicant argued that the Jayaraman longitudinal support member does not have a looped end. However, as seen in the drawing (Fig. 7) the openings 55 in the ends of the longitudinal members clearly provide a loop at the ends. The Examiner is not giving any special definition to the term "loop".

Argument 4 (d)(iii)

Applicant additionally argues that White/Jayaraman do not disclose in combination the longitudinal support member being shorter than the framework. However, the Examiner notes that Jayaraman shows (Figs. 1,3) the support member as having a length only the distance between the stent sections. Additionally, Jayaraman shows (Figs. 7,8) that the longitudinal member is shorter than the length of the stent graft. Thus, by having the shorter length of the body of the stent graft it provides a gimbal.

Argument 4 (d)(iv)

Applicant argues that White and Jayaraman do not disclose one or more apices of a distal most stent than two stents of the framework. However, as seen in the drawings of White's stent graft there is clearly apices on the distally extending stent beyond the graft than inner end stents.

Argument 4 (d)(v)

Applicant also argues the stent graft combination of White/Jayaraman does not result in a stent graft with stents having a linear profile or circular cross-section. White discloses the stent graft having a longitudinal dimension which inherently has a linear profile. As stated above anything that can lie along a line can be said to be linear. Also White discloses the stent graft as tubular, thus it has stents with a circular cross-section. In conclusion it can be said that the combination of White and Jayaraman renders the claims obvious.


(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

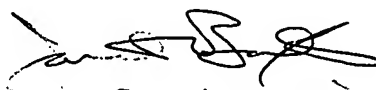
Respectfully submitted,

Brian E. Pellegrino


BRIAN E. PELLEGRINO
PRIMARY EXAMINER

Conferees:

Janet Baxter



Cris Rodriguez

